

Effect of early treatment initiation in real-world settings on disability progression: A series of 281 relapsing-remitting multiple sclerosis patients, Rennes, France

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Context: Treatment options for Relapsing-Remitting Multiple Sclerosis (RRMS) largely evolved for the last twenty years. Natural history studies, immunopathological studies and extensions of randomized clinical trials incite to act soon in disease development. Some observational studies tend to show a greater benefit of early treatment initiation but results need to be confirmed.

Objective: To measure early treatment initiation effect in real-world settings on disability progression.

Methods: This retrospective observational study included 281 patients diagnosed with RRMS between January 1st, 2001 and December 31st, 2010 and initiating an approved disease modifying treatment over this period in Rennes, France. The outcome was assignment of irreversible EDSS score of 3. Treatment started within 12 months following MS onset was considered as early treatment (N=120). Cox modelling was adjusted on sex, age at treatment initiation, number of relapses in the year before treatment initiation and EDSS score at treatment initiation.

Results: The median MS duration before treatment initiation was 1.25 (0.04 – 9.46) years. The mean±SD follow-up duration from treatment initiation was 8.6±3.0 years for patients from “early” group and 7.6±3.1 for patients from “delayed” group. Patients from “early” group were younger than in “delayed” group (29.4 ± 8.5 vs 33.2 ± 10.0, p=10⁻⁴). After adjustment, patients from “delayed” group had a high risk of reaching an EDSS score of 3 even if it was not statistically significant (Hazard Ratio (HR) = 1.63, 95%CI = [0.89; 3.20]). Considering time to treatment initiation as continuous variable gave a HR of 1.18, 95%CI = [0.98; 1.41].

Discussion: Our study suggests the benefit of early treatment initiation on disability progression, but probably suffered from a lack of statistical power. Further analysis will be performed taking into account MRI data, and with secondary outcomes (delay to reach an EDSS score of 4, 6 and to convert into secondary progressive MS).